INDEX

ABRAMOWITZ, A. A. The rôle of the hypophyseal melanophore hormone in the chromatic physiology of Fundulus, 134.

Amoeba, rate of locomotion, as affected by luminous intensity and adaptation to light, 126.

ANDERSON, BERTIL GOTTFRID, H. LUMER and L. J. ZUPANCIC, JR. Growth and variability in Daphnia pulex, 444.

Arbacia, localization of micromere-, skeleton- and entoderm-forming material in unfertilized egg of, 295.

——, effect of salts of heavy metals on development, 401.

Ascaris eggs, suppression of cleavage by ultracentrifuging, 99.

Autosomal lethals in wild populations of Drosophila pseudoobscura, 542.

Autot[illegible] in brachyuran, Uca pugnax,

BACTERIAL content of clover nodule cells, 112.

BALL, ERIC G., AND C. CHESTER STOCK. The pH of sea water as measured with the glass electrode, 221.

BAUER, HANS. *See* Tyler and Bauer, 164.

BEAMS, H. W., AND R. L. KING. The suppression of cleavage in Ascaris eggs by ultracentrifuging, 99.

Blood and body fluid, of turtle, colloid osmotic pressure, nitrogen content and refractive index, 504.

BOYD, WILLIAM C. Cross-reactivity of various hemocyanins with special reference to the blood proteins of the black widow spider, 181.

BUTLER, MARGARET RUTH. The effect of its nitrogen content on the decomposition of the polysaccharide extract of Chondrus crispus, 143.

CALANUS finmarchicus, seasonal production off Woods Hole, 464.

CAMPBELL, MILDRED L., AND ABBY H. TURNER. Serum protein measurements in the lower vertebrates. I. The colloid osmotic pressure, nitrogen content, and refractive index of turtle serum and body fluid, 504.

CARVER, GAIL L. Studies on productivity and fertility of Drosophila mutants, 214.

Centrifuging, determination of polarity by, in eggs of Fucus, 249.

Cerebratulus lacteus, determination in early development of, 317.

CHACE, F. A., JR. *See* Welsh, Chace and Nunnemacher, 185.

CHILD, GEORGE P. *See* Glaser and Child, 205.

Chondrus crispus, effect of nitrogen content on decomposition of polysaccharide extract, 143.

Chromatic physiology of Fundulus, rôle of hypophyseal melanophore hormone, 134.

Chromatophore reactions in normal and albino paradise fish, 535.

CLANCY, C. M. *See* Whitaker and Clancy, 552.

CLARKE, GEORGE L., AND DONALD J. ZINN. Seasonal production of zooplankton off Woods Hole with special reference to Calanus finmarchicus, 464.

Cleavage and polar body extrusion in artificially activated eggs of Urechis caupo, 164.

——, suppression of, in Ascaris eggs by ultracentrifuging, 99.

Clover nodule, bacterial and alleged mitochondrial content of cells of, 112.

Color pattern, genetics and histology, in normal and albino paradise fish, 527.

COONFIELD, B.R., AND A. GOLDIN. The problem of a physiological gradient in Mnemiopsis during regeneration, 197.

Cortex, frontal, of seal, physiological and histological study of, 591.

DALTON, H. CLARK AND H. B. GOODRICH. Chromatophore reactions in the normal and albino paradise fish, 535.

Daphnia pulex, growth and variability in, 444.
Determination, in early development of Cerebratulus lacteus, 317.
Differentiation, energetics of, VI, 261.
Diurnal migration, deep water animals, 185.
Drosophila mutants, fertility and productivity, 214.
—— pseudoöbscura, autosomal lethals in wild populations of, 542.

ENDOCRINE feeding, relation to regeneration, growth and egg capsule production in Planaria, 227.
Entoderm-forming material, localization of, in unfertilized egg of Arbacia, 295.
Environmental factors, differential effect of, on Microbracon hebetor Say and its host, Ephestia kuhniella Zeller, 147.

FERTILITY and productivity of Drosophila mutants, 214.
FRY, HENRY J. Studies of the mitotic figure. VI. Mid-bodies and their significance for the central body problem, 565.
Fucus furcatus, effect of salinity on growth of eggs of, 552.
Fundulus, chromatic physiology of, 134.
——, development of pituitary gland, 93.
——, histochemistry of ovary, 67.
Fungi, saprophytic, occurrence in marine muds, 242.

GENETICS and histology of color pattern in normal and albino paradise fish, 527.
GLASER, OTTO AND GEORGE P. CHILD. The hexoctahedron and growth, 205.
GOLDIN, A. *See* Coonfield and Goldin, 197.
GOLDSMITH, E. D. The relation of endocrine feeding to regeneration, growth, and egg capsule production in Planaria maculata, 227.
GOODRICH, H. B., AND MAURICE A. SMITH. Genetics and histology of the color pattern in the normal and albino paradise fish, Macropodus opercularis L., 527.
GOODRICH, H. B. *See* Dalton and Goodrich, 535.
Growth and the hexoctahedron, 205.
—— and variability in Daphnia pulex, 444.
——, effect of salinity on, eggs of Fucus, 552.
——, relation of endocrine feeding in Planaria to, 227.
GUTHRIE, MARY J. *See* Marza, Marza and Guthrie, 67.

HEILBRUNN, L. V. AND KARL M. WILBUR. Stimulation and nuclear breakdown in the Nereis egg, 557.
Hemocyanins, cross-reactivity of, with special reference to blood proteins of black widow spider, 181.
HERSHKOWITZ, S. G. *See* Sayles and Hershkowitz, 51.
Hexoctahedron and growth, 205.
Histochemistry of ovary of Fundulus heteroclitus and differentiating oöcytes, 67.
HOADLEY, LEIGH. Autotomy in the brachyuran, Uca pugnax, 155.
Hormone, hypophyseal melanophore, rôle in chromatic physiology of Fundulus, 134.
HÖRSTADIUS, SVEN. Experiments on determination in the early development of Cerebratulus lacteus, 317.
——, ——. Investigations as to the localization of the micromere-skeleton and entoderm-forming material in unfertilized egg of Arbacia, 295.
HUMASON, W. D. *See* Tyler and Humason, 261.

KENK, ROMAN. Sexual and asexual reproduction in Euplanaria tigris (Girard), 280.
KETCHUM, BOSTWICK. *See* Redfield, Smith and Ketchum, 421.
KING, R. L. *See* Beams and King, 99.

LETHALS, autosomal, in wild populations of Drosophila pseudoöbscura, 542.
Light, adaptation to and rate of locomotion in Amoeba, 126.
LILLICK, LOIS C. Seasonal studies of the phytoplankton off Woods Hole, Massachusetts, 488.
Localization of micromere-, skeleton and entoderm-forming material in unfertilized egg of Arbacia, 295.
Locomotion and relation to luminous intensity and adaptation to light in Amoeba, 126.

LUMER, H. *See* Anderson, Lumer and Zupancic, Jr., 444.

MARINE Biological Laboratory, thirty-ninth report of, 1.
MARZA, V. D., EUGENIE V. MARZA AND MARY J. GUTHRIE. Histochemistry of the ovary of Fundulus heteroclitus with special reference to the differentiating oöcytes, 67.
MAST, S. O., AND NATHAN STAHLER. The relation between luminous intensity, adaptation to light, and rate of locomotion in Amoeba proteus (Leidy), 126.
MATTHEWS, SAMUEL A. The development of the pituitary gland in Fundulus, 93.
Microbracon hebetor Say and host, Ephestia kühniella Zeller, differential effect of environmental factors, 147.
Micromere-forming material, localization of, in unfertilized egg of Arbacia, 295.
Mid-bodies and their significance for the central body problem, 565.
Migration, diurnal, of deep water animals, 185.
MILLER, E. DEWITT. A study of the bacterial and alleged mitochondrial content of the cells of the clover nodule, 112.
Mnemiopsis, physiological gradient during regeneration, 197.
Muscles, responses of, in squid to repetitive stimulation of giant nerve fibers, 237.
Mutants, in Drosophila, fertility and productivity, 214.

NEREIS egg, stimulation and nuclear breakdown in, 557.
Nitrogen content, colloid osmotic pressure and refractive index of turtle serum and body fluid, 504.
—— ——, effect on decomposition on polysaccharide extract of Chondrus crispus, 143.
Nucleus, breakdown, and stimulation in Nereis egg, 557.
NUNNEMACHER, R. F. *See* Welsh, Chace and Nunnemacher, 185.

OVARY, histochemistry of, Fundulus heteroclitus, and differentiating oöcytes, 67.

PARADISE fish, chromatophore reactions in normal and albino, 535.
—— ——, genetics and histology of color pattern, in normal and albino, 527.
PAYNE, NELLIE M. The differential effect of environmental factors upon Microbracon hebetor, Say (Hymenoptera: Braconidæ) and its host, Ephestia kühniella Zeller (Lepidoptera: Pyralidæ). III, 147.
pH of sea water, measured with glass electrode, 221.
Phosphorus, organic, cycle of, in Gulf of Maine, 421.
Phytoplankton, seasonal studies of, off Woods Hole, Massachusetts, 488.
Pituitary gland, development of, in Fundulus, 93.
Placoid scale types and their distribution in Squalus acanthias, 51.
Polar body extrusion and cleavage in artificially activated eggs of Urechis caupo, 164.
Polarity, determination of, by centrifuging eggs of Fucus furcatus, 249.
Productivity and fertility of Drosophila mutants, 214.
PROSSER, C. LADD, AND JOHN Z. YOUNG. Responses of muscles of the squid to repetitive stimulation of the giant nerve fibers, 237.

REDFIELD, ALFRED C., HOMER P. SMITH AND BOSTWICK KETCHUM. The cycle of organic phosphorus in the Gulf of Maine, 421.
Regeneration, and physiological gradient during, in Mnemiopsis, 197.
——, relation of endocrine-feeding to, in Planaria, 227.
Reproduction, sexual and asexual, in Euplanaria tigris, 280.
Respiratory rates, comparative temperature coefficients, unfertilized and fertilized eggs, 261.
RIOCH, DAVID MCK. A physiological and histological study of the frontal cortex of the seal, 591.

SALINITY, effect on growth of eggs of Fucus furcatus, 552.
Salts, of heavy metals, effect on development of sea urchin, 401.
SAYLES, LEONARD P., AND S. G. HERSHKOWITZ. Placoid scale types and their distribution in Squalus acanthias, 51.

Seal, physiological and histological study of frontal cortex of, 591.
Serum protein measurements in marine teleosts and elasmobranchs, 511.
Sea urchin, development, effect of salts of heavy metals on, 401.
Sea water, pH, of measured with glass electrode, 221.
Skeleton-forming material, localization of, in unfertilized egg of Arbacia, 295.
SMITH, HOMER P. *See* Redfield, Smith and Ketchum, 421.
SMITH, MAURICE A. *See* Goodrich and Smith, 527.
SPARROW, F. K., JR. The occurrence of saprophytic fungi in marine muds, 242.
Squalus acanthias, placoid scale types and their distribution, 51.
STAHLER, NATHAN. *See* Mast and Stahler, 126.
Stimulation and nuclear breakdown in Nereis egg, 557.
——, repetitive, of giant nerve fibers, responses of muscles in squid to, 237.
STOCK, C. CHESTER. *See* Ball and Stock, 221.
STURTEVANT, A. H. Autosomal lethals in wild populations of Drosophila pseudoöbscura, 542.

TEMPERATURE coefficients of respiratory rates of unfertilized and fertilized eggs, 261.
Thirty-ninth report of the Marine Biological Laboratory, 1.
TURNER, ABBY H. *See* Campbell and Turner, 504.
——, ——— —. Serum protein measurements in the lower vertebrates. II. In marine teleosts and elasmobranchs, 511.
Turtle serum and body fluid, colloid osmotic pressure, nitrogen content and refractive index of, 504.
TYLER, ALBERT, AND HANS BAUER. Polar body extrusion and cleavage in artificially activated eggs of Urechis caupo, 164.
TYLER, ALBERT, AND W. D. HUMASON. On the energetics of differentiation, VI. Comparison of the temperature coefficients of the respiratory rates of unfertilized and of fertilized eggs, 261.

UCA pugnax, autotomy in, 155.
Ultracentrifuging, suppression of cleavage in Ascaris eggs by, 99.
Urechis caupo, artificially activated eggs of, polar body extrusion and cleavage in, 164.

VARIABILITY and growth in Daphnia pulex, 444.

WATERMAN, A. J. Effect of salts of heavy metals on development of the sea urchin, Arbacia punctulata, 401.
WELSH, J. H., F. A. CHACE, JR., AND R. F. NUNNEMACHER. The diurnal migration of deep water animals, 185.
WHITAKER, D. M. Determination of polarity by centrifuging eggs of Fucus furcatus, 249.
——, — —, AND C. M. CLANCY. The effect of salinity upon the growth of eggs of Fucus furcatus, 552.
WILBUR, KARL M. *See* Heilbrunn and Wilbur, 557.

YOUNG, JOHN Z. *See* Prosser and Young, 237.

ZINN, DONALD J. *See* Clarke and Zinn, 464.
Zoöplankton, seasonal production of, off Woods Hole, 464.
ZUPANCIC, L. J., JR. *See* Anderson, Lumer and Zupancic, 444.